

RECLAMATION

Managing Water in the West

IMWDEWS - Drought & Climate Outlook

Policy and Administration



U.S. Department of the Interior
Bureau of Reclamation

October 25, 2016

Background

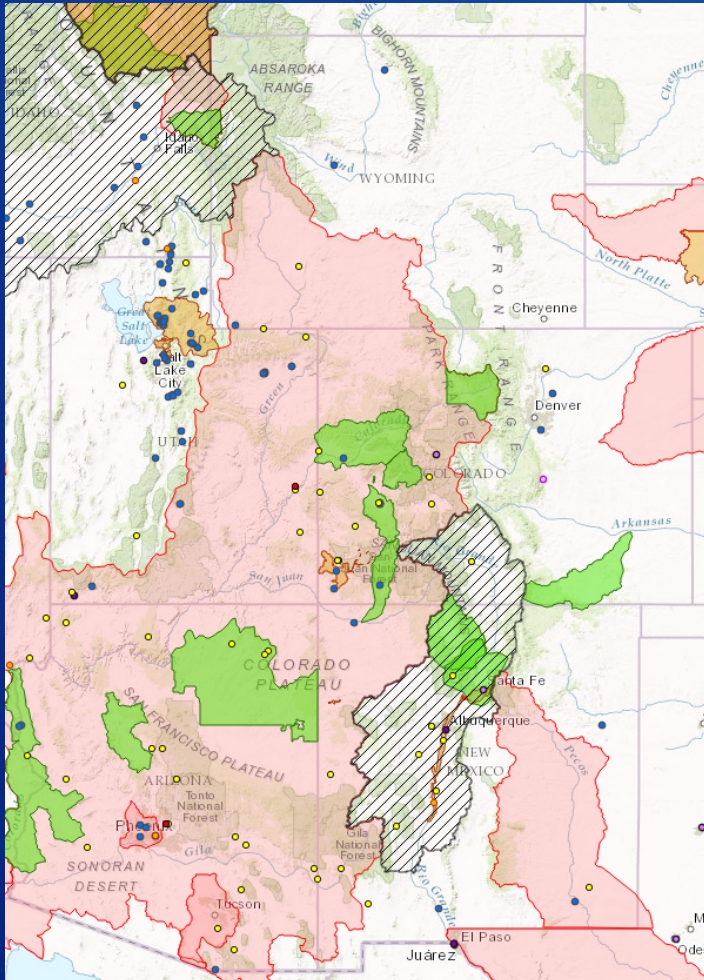
The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.



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WaterSMART Program

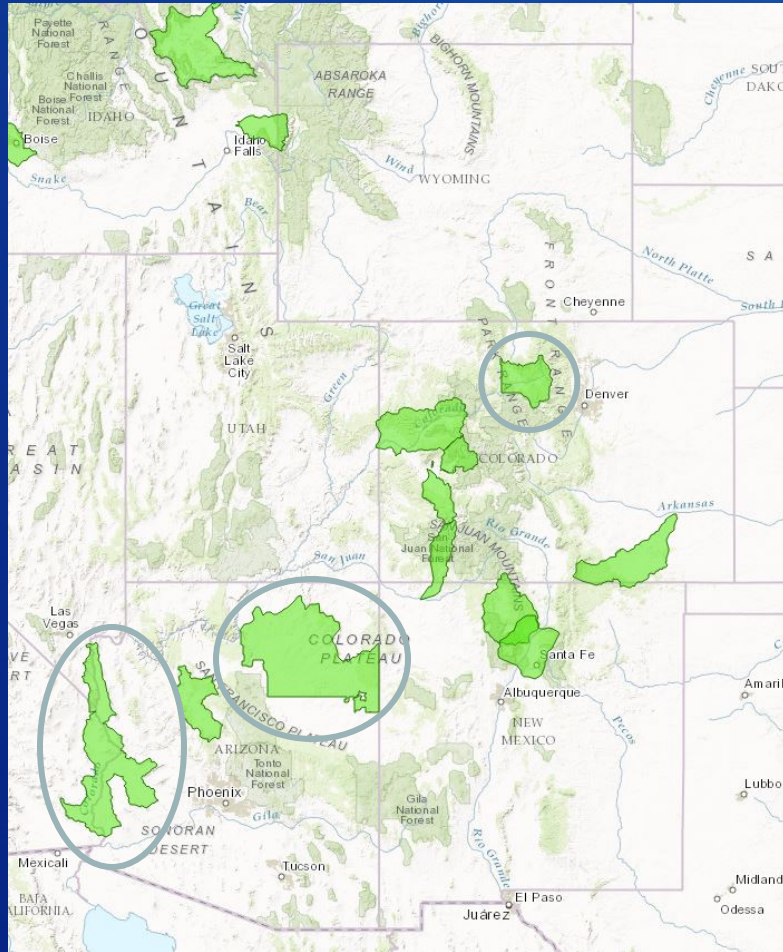
- WaterSMART Grants
- Drought Response Program
- Cooperative Watershed Management Program
- Basin Study Program
- Title XVI Water Reclamation and Reuse Program



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WaterSMART

Cooperative Watershed Management Program



Phase I

- Establish and further develop collaborative watershed groups

Phase II

- Fund watershed management projects

Little Colorado River Watershed Chapters Association

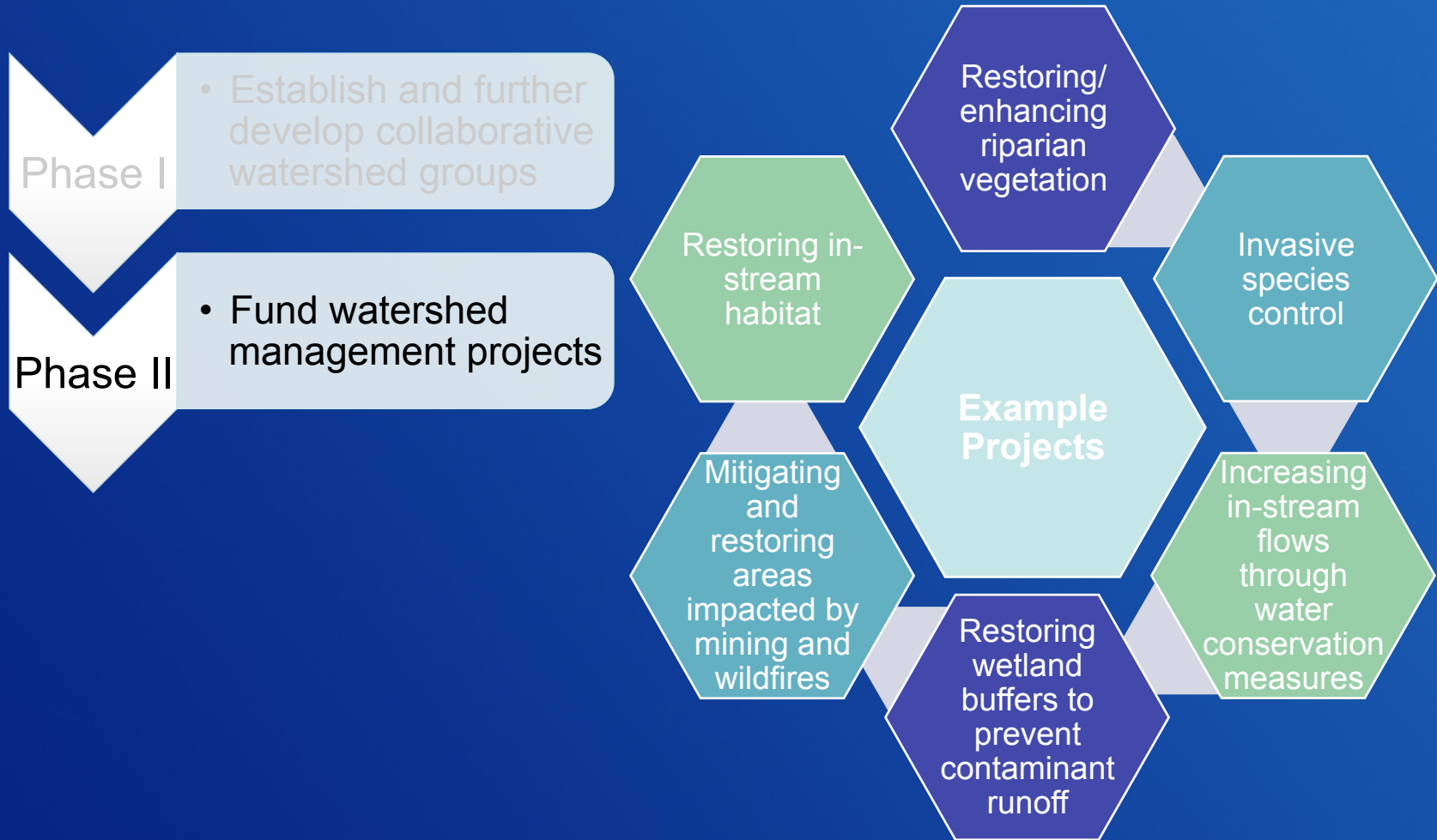
Working Across Tribal Borders: Restoring the Black Mesa Watersheds Together

Establishment of an intertribal working group to develop a watershed restoration plan focusing on insufficient water supply for human and livestock consumption, inadequate flows for habitat, and water quality degradation.

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WaterSMART

Cooperative Watershed Management Program



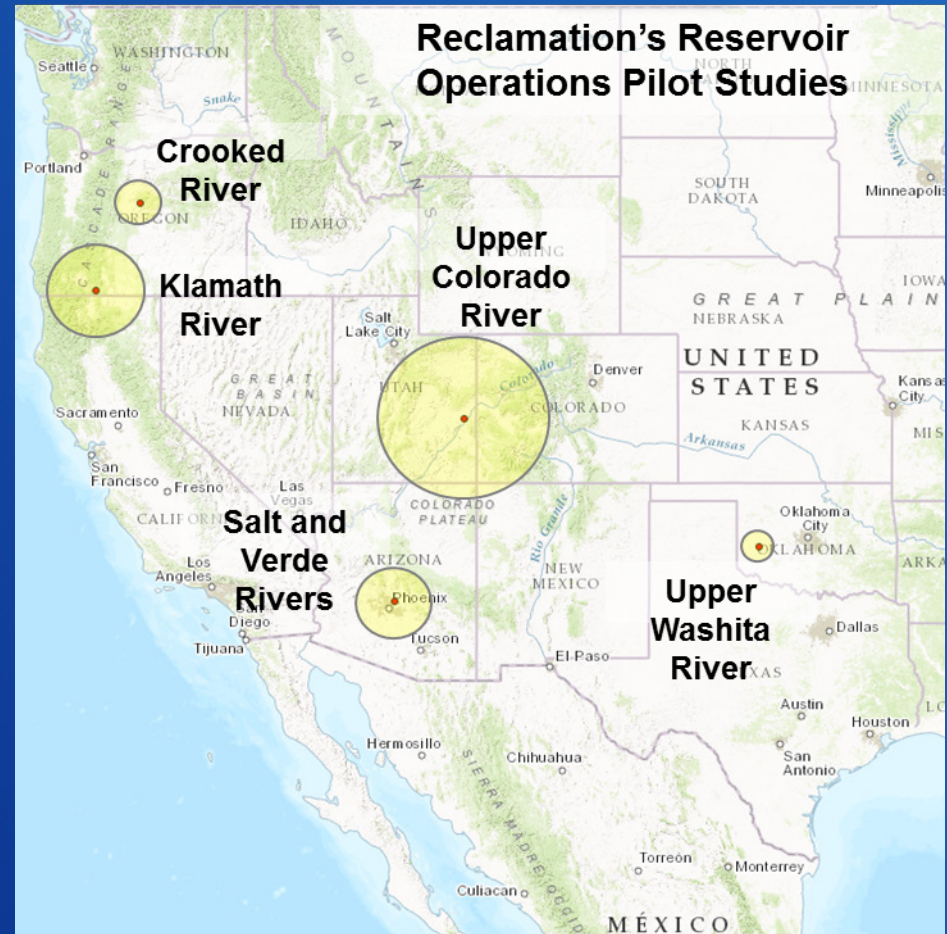
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WaterSMART Basin Study Program

West-Wide Climate Risk Assessments

Reservoir Operations Pilot Studies

- **West-wide Climate Risk Assessments (WWCRA)** – WaterSMART activity focused on incorporating the best available science into planning activities and operations
- **Reservoir Operations Pilot Initiative** – high priority activity under WWCRA focused on improving reservoir operations
- In 2015, Reclamation **selected five pilot studies** to evaluate how weather, hydrology, and climate change information could better inform reservoir operations.



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WaterSMART Basin Study Program

West-Wide Climate Risk Assessments

Reservoir Operations Pilot Studies

Upper Colorado Region Pilot

Pilot Reservoirs: Upper Colorado Reservoirs, Flaming Gorge, Aspinall, Navajo, and Lake Powell

Main objectives include long-term operations modeling and extended operations during drought



Lower Colorado Region Pilot

Pilot Reservoirs: Salt River Project, Salt and Verde River

Main objectives include evaluating climate change impacts to operations on extreme events



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New WaterSMART Grants Funding Opportunities

- **Small Scale Water Efficiency Projects**
 - Draft evaluation criteria out for public review
 - Funding Opportunity Announcement expected in December 2016
- **Water Marketing**
 - Draft evaluation criteria expected to go out for public review in November 2016
 - Funding Opportunity Announcement expected in February 2017

Drought Response Program

Drought
Contingency
Planning

Drought
Resiliency
Projects

Emergency
Response
Actions

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Drought Response Program

Drought Contingency Planning

- How will we recognize the next drought in the early stages?**
- How will drought affect us?**
- How can we protect ourselves from the next drought?**

Drought Contingency Plans include six elements:

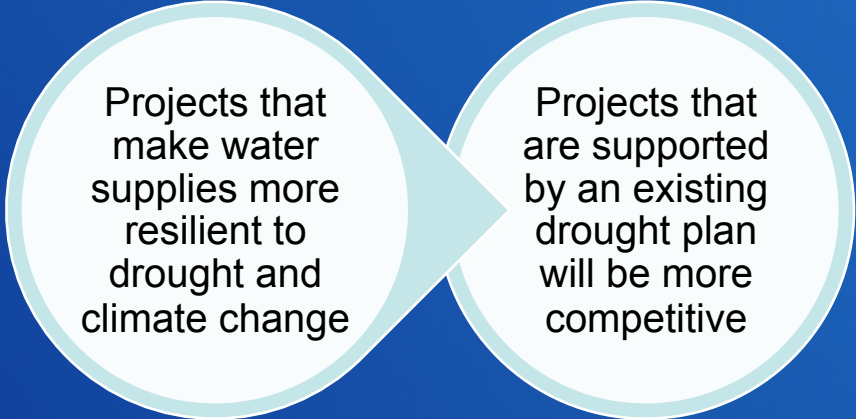
- 1. Drought Monitoring**
- 2. Vulnerability Assessment, including consideration of climate change**
- 3. Mitigation Actions**
- 4. Response Actions**
- 5. Operational and Administrative Framework**
- 6. Plan Update Process**

Drought Response Program

Drought Resiliency Projects

Projects that:

- Increase the amount/reliability of water supplies
 - System modifications or improvements
 - Storing water and/or recharging groundwater supplies
 - Developing alternative sources of water supply
- Improve water management and increase operational flexibility
 - Decision Support Tools
 - Modeling
 - Measurement
- Provide benefits for fish and wildlife and the environment

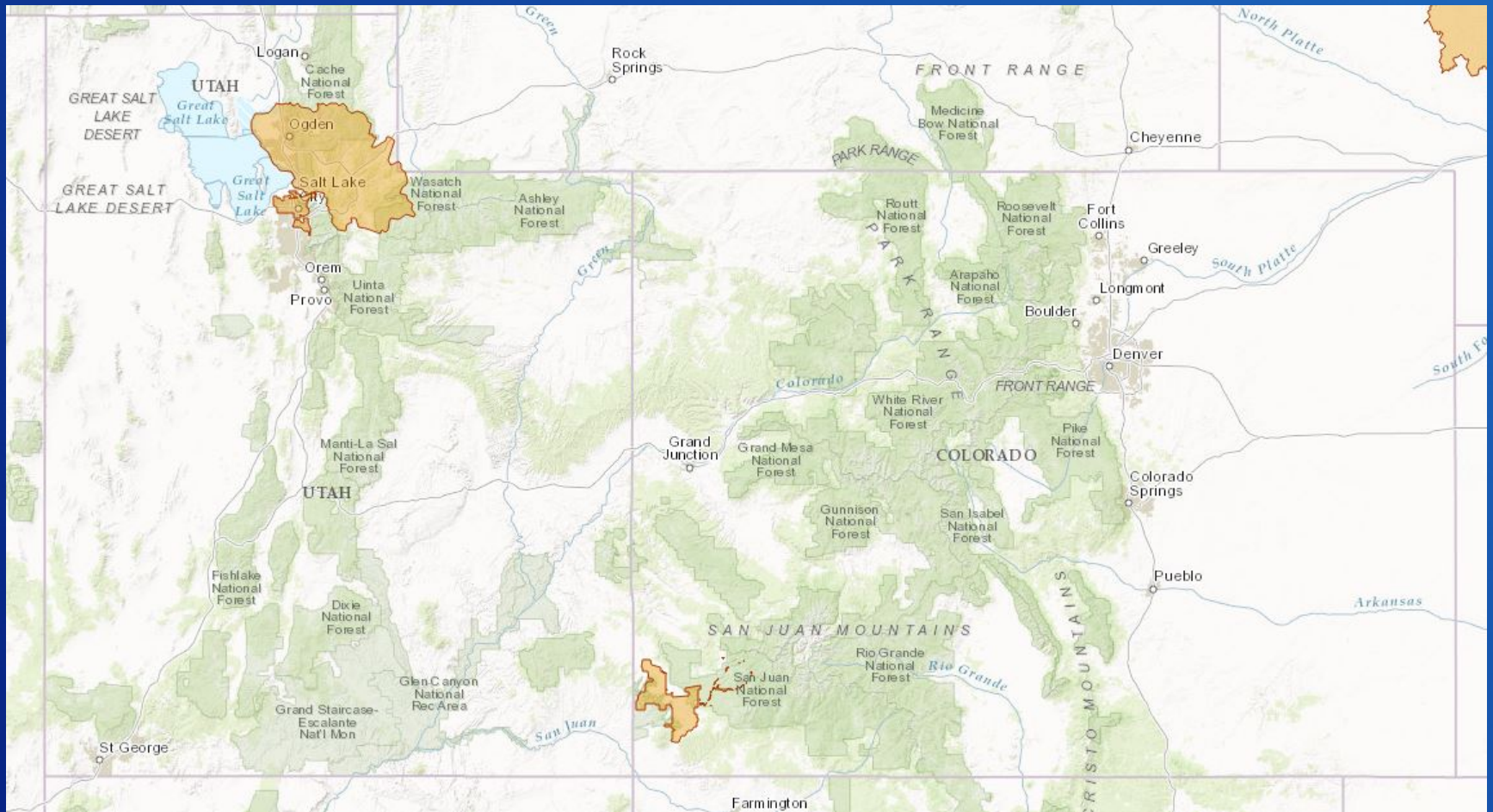


Projects that make water supplies more resilient to drought and climate change

Projects that are supported by an existing drought plan will be more competitive

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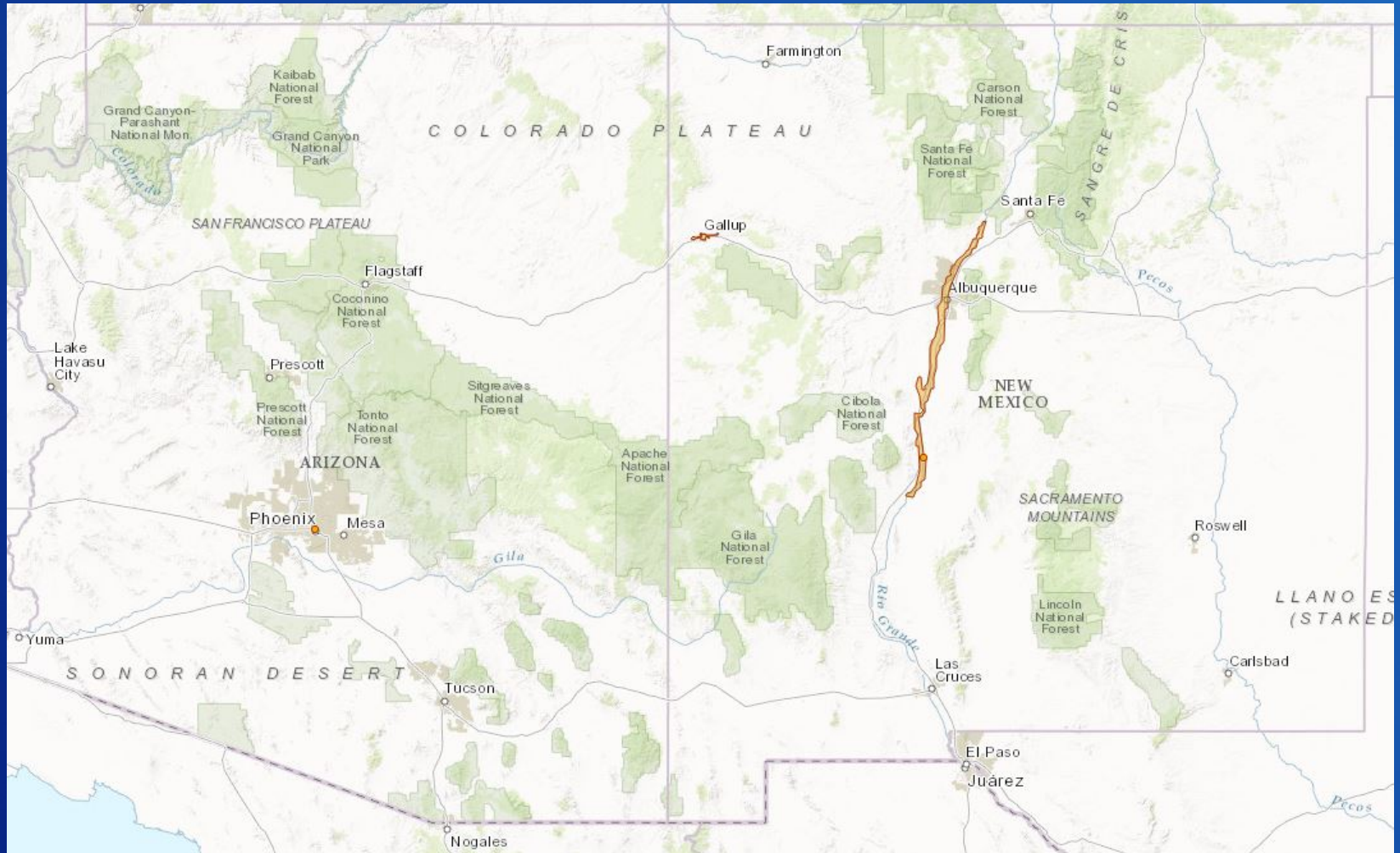
Drought Response Program Projects underway in Colorado & Utah



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Drought Response Program

Projects underway in Arizona & New Mexico



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Efforts in the Upper and Lower Colorado Regions

- **Pilot System Conservation Program**
 - Central Arizona Water Conservation District, the Metropolitan Water District of Southern California, the Southern Nevada Water Authority, and Denver Water
- **UC – Drought Operation Memorandum of Agreement**
- **LC – Memorandum of Understanding outlines goals directing proactive and voluntary actions to add to Lake Mead. Also developing a drought contingency plan for long-term drought resilience.**

Thank You!

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